Proposed Amendment USSN 10/037,925

Cancel claims 1 - 7, 11 - 13 and 15 - 54 without prejudice.

8. (Amended) A method of alignment, comprising the steps of:

holding a first optical element in opposition to a second optical element for interalignment therewith, said second optical element including a plurality of receivers including a first marginal receiver and a second marginal receiver, said first optical element having a first axis and a second axis, and said second optical element having a third axis and a fourth axis;

detecting a plurality of light signals that pass from said first optical element to said second optical element, said light signals including a first light signal that impinges on said first marginal receiver, and a second light signal that impinges on said second marginal receiver;

in a first phase of operation rotating said first optical element about a Y-axis until said second axis is in a parallel alignment with said fourth axis; and

in a second phase of operation displacing said first optical element along said Y-axis;

while displacing said first optical element along said Y-axis, recording a signal strength of said first light signal and said second light signal; and

displacing said first optical element along a Z-axis until said signal strength has an optimal value, [The method according to claim 1] further comprising the steps of:

in said first phase of operation displacing said first optical element stepwise on an interval of said Z-axis, defining a plurality of incremental positions thereon;

at each of said incremental positions displacing said first optical element on an interval of said Y-axis;

while said step of displacing said first optical element on said interval of said Y-axis is being performed, determining a function of said first light signal and determining a [said] function of said second light signal;

after said step of displacing said first optical element stepwise on said interval of said Z-axis has been performed, determining a first point on said Z-axis where said function of said first light signal has a first optimum value and a second point on said Z-axis where said function of said second light signal has a second optimum value;

calculating a difference ΔZ between said second point and said first point;

responsive to said step of calculating rotating said first optical element about said Y-axis to reduce a distance between said first marginal receiver and said second point.

9. (Original) The method according to claim 8, wherein said step of rotating said first optical element about said Y-axis comprises rotation by an angle θ that is given by

$$\theta = \sin^{-1} (\Delta Z/d)$$

where d is a displacement between said first marginal receiver and said second marginal receiver.

10. (Original) The method according to claim 8, wherein said function is a full-width half maximum, said first optimum value and said second optimum value are each a minimum value of said function.

14. (Amended) A method of alignment, comprising the steps of:

holding a first optical element in opposition to a second optical element for interalignment therewith, said second optical element including a plurality of receivers including a first marginal receiver and a second marginal receiver, said

first optical element having a first axis and a second axis, and said second optical element having a third axis and a fourth axis;

detecting a plurality of light signals that pass from said first optical element to said second optical element, said light signals including a first light signal that impinges on said first marginal receiver, and a second light signal that impinges on said second marginal receiver;

in a first phase of operation rotating said first optical element about a Y-axis until said second axis is in a parallel alignment with said fourth axis; and

in a second phase of operation displacing said first optical element along said Y-axis;

while displacing said first optical element along said Y-axis, recording a signal strength of said first light signal and said second light signal; and

displacing said first optical element along a Z-axis until said signal strength has an optimal value, [The method according to claim 1] further comprising the steps of:

in a first iteration: displacing said first optical element on an interval of said Y-axis;

while said step of displacing said first optical element is being performed in said first iteration, determining a first point on said Y-axis wherein said first signal has a first maximum magnitude, and a second point on said Y-axis where said second signal has a second maximum magnitude [determining a first magnitude of a second signal at said first point];

rotating said first optical element about said Z-axis by a first increment;

in a second iteration: displacing said first optical element on said interval of said Y-axis;

while said step of displacing said first optical element is being performed in said first iteration, determining a third point on said Y-axis wherein said first signal has a

third maximum magnitude, and a fourth point on said Y-axis where said second signal has a fourth maximum magnitude [determining a first magnitude of a second signal at said first point];

responsive to a difference between said third [first] magnitude and said [second] fourth magnitude, rotating said first optical element about said Z-axis by a second increment.